

50997821

Dart Aerospace
1270 Queen St
Hawkesbury, ON
K6A 1K7
Canada

D350-636-012
Job Sheet 180133



Tel (613) 632-5200

Part No: D350-636-012

Job Qty: 1 ea

5099782

Part Name: Skidtubes RH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp.



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 6/29/18

Job Tracking No:

Due Date: 7/26/18

Created By: Marie Lajeunesse

Type: Stock

Description:

Note: DWG D3492 REV E SHEET 1, D2750-042 REV G SHEETS 1,2,5,9 IPP Rev:I 02.09.25 IPP Rev:J 06-03-23 As per Rev D IPP Rev:K 06-07.13 As per dsi9343 IPP Rev:L 07-07-28 Added SS Wearplates(Rev E) JLM Verf:EC IPP Rev:M 08-04-22 DD verified:EC IPP Rev:N 08-09-23 revF DD verified:ec IPP Rev:O 09-02-06 per PAR09-010 DD verf:EC IPP Rev:P 10.06.22 revise seq110 DD verf:EC IPP Rev:Q 10.10.01 as per IIN revH DDverf:EC IPP REV:R 13.08.27 PER ECN13-594 DD VERF:JLM

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	1 Ea		7/26/18	0.00	0.00	Start Up Skidtubes-1		M/G
110	Skidtubes	1 pcs		7/26/18	0.00	4.36	Skidtubes-4		M/G
120	QC	1 pcs		7/26/18	0.00	0.00	QC10		D 18-08-21
130	QC	1 pcs		7/26/18	0.00	0.00	QC5		D 18-08-21
140	HandFinish	1 pcs		7/26/18	0.00	0.91	HandFinish1		D.R 18/08/21
150	QC	1 pcs		7/26/18	0.00	0.00	QC7-2		M/G
160	Skidtubes	1 pcs		7/26/18	0.00	4.36	Skidtubes-1		SUSAS
170	QC	1 pcs		7/26/18	0.00	0.00	QC10		38 DAS
180	QC	1 pcs		7/26/18	0.00	0.00	QC5		9-89 38
190	HandFinish	1 pcs		7/26/18	0.00	0.91	HandFinish2		D.R 18/09/10
200	SprayPaint	1 pcs		7/26/18	0.00	0.69	Spray Paint		DAS
205	Outsource	1 pcs		7/26/18			ATE003-VC	SEP 12 2018	DAS
210	QC	1 pcs		7/26/18	0.00	0.00	QC14		SEP 13 2018
230	HandFinish	1 pcs		7/26/18	0.00	0.91	HandFinish4		SEP 14 2018
240	QC	1 pcs		7/26/18	0.00	0.00	QC5		SEP 14 2018
250	Packaging	1 pcs		7/26/18	0.00	0.00	Packaging1-3		SEP 18 2018
260	QC	1 pcs		7/26/18	0.00	0.00	QC4		DAS
270	Packaging	1 pcs		7/26/18	0.00	0.00	Packaging3-1		DAS
275	DC	1 pcs		7/26/18	0.00	0.00	DC		SEP 18 2018
280	QC21-FG	1 Ea		7/26/18	0.00	0.00	QC21		SEP 18 2018

Part Op 110 - 1- Pick D2600-3 Bent Drill pilot holes as per Dwg D2750 sheet 4 (D2750-2 details). Drill using drill Jig DT8150 & Descriptions: DT8863A for second side only DT8863B for first side (detail K) 4- Locate DT8329 off of blade fitting bolt holes and drill pilot holes for blade fitting. Open to 0.500" using hole saw. VERIFY AND RECORD FWD BEND ANGLE. 6- Drill pilot holes for wearplates as per Dwg D2750 using DT8108 open to 0.297". 7- Open up holes of Detail J to 0.297" (total of 2 holes per side) 8- Weld D2744 Cap as per Dwg D2750 and QSI 004. Fill grooves in bend left from bending as per QSI 004 9- Grind welds flush as per Dwg D2750

160 - 1- Open up holes of Detail L using hole saw and ground handling to 0.625" (total of 8 holes per side) as per dwg D2750. 2- Open up holes of Detail K using hole saw to 0.750" (total of 4 holes per side) as per dwg D2750. 3- Open float holes using uni-bit to .500" (4 per Side) 4- Chamfer holes of Detail K, L, ground handling and float holes per dwg D2750 (welding instructions on sheet 9) 5- Deburr and blow out all chips from inside of tube 6- Prepare tube for welding, remove alodine as required. 7- Bond web D2739 in place as per QSI 015, let cure for 12hrs. A/R Sikaflex-291 batch: 1130874 exp. date: 11/30/18 ***ATTN: USE I-BEAM LOCATION AID (BLADE FITTING)*** 8- Weld spacers D3490-1, D3490-3

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____ Date : _____ _____ _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%;"> <tr> <td>Skid-tube ☐</td> <td>Cross tube ☐</td> <td>Water Jet ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td colspan="2"></td> <td>Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐			Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																		
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Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																		
		Supplier ☐																			
			MRB (QSI042) Approval _____ _____																		
			Completed By _____																		
			Lead hand / Supervisor Approval Verification _____																		
			QC / QA Coordinator Approval _____																		

Container No: S099782
 Part: D350 - 636 - 012
 Job No: 180133
 Serial No/Batch: S0997
 Revision: _____
 Inspector: _____
 Exp Date: _____
 Instructions: TC STC SH99 - 7

Root Cause			
Environment ☐			
Design ☐			
Doc/Data ☐			
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐
Past Expiry Date ☐	Manufacturing Process ☐		
Misidentified ☐	Past Due ☐		

OTHER : _____

and D2743 as per dwg D2750 & QSI004 (welding instructions on sheet 9) A/R Aluminum Rod batch: 138834 9- At section AP-AP drill out x-bolt spacer to 0.404" 10-Grind welds flush as per Dwg D2750 11- Spot face ground handling holes section (total of 4 places per side) as per dwg D2750 12- Deburr holes, ensure tube is free of all scratches before sending to paint.

180 - ***VERIFY C'BOARD IS GOOD***

190 - Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch.

200 - 1- PRIME AS PER DWG AND QSI 005 4.2 PRIMER PRC DESOTO 515X349 BATCH: _____ 2- PAINT WHITE AS PER DWG AND QSI 005 4.2 PAINT BATCH: 11138834

210 - Inspect for foreign object per QSI 024

230 - 1-Install inserts as per dwg D2750 2-Inspect for Foreign Objects 3-Install blade fitting D3488-042, wearshoes and ground handling hardware as per dwg D2750 SIKA FLEX 241 BATCH: 11138834 EXP DATE: 1416

4-assemble o'ring to plug as per dwg D3492 and apply o'ring lube A/R 55-o'ring lube batch: _____ 5-Coat all exposed fasteners with "LPS Procyon" batch: 11138834

270 - Package as per PPP D350-636-012

275 - record fwd angle: 89.9 Photocopy blue file and type labels per PPP D350-636-012 CHG 007

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
D2600-3-BENT-RH	Extrusion Bent RH	1 Ea (1 ea)	90-Start up Operation	5081485
D2744	Cap	1 Ea (1 ea)	110-Skidtubes	5060499
D2739	350 I-Beam	1 Ea (1 ea)	160-Skidtubes	5091787
D2743	Crossbolt Spacer	8 Ea (8 ea)	160-Skidtubes	5090617
D3490-1	Cross Bolt Spacer	4 Ea (4 ea)	160-Skidtubes	5082748
D3490-3	Cross Bolt Spacer	4 Ea (4 ea)	160-Skidtubes	5082950
ALS4-1032-225	Rivnut	38 Ea (38 ea)	230-HandFinish	5055397
AN3C5A	Bolt	34 Ea (34 ea)	230-HandFinish	5095214
AN3C6A	Bolt	4 Ea (4 ea)	230-HandFinish	5076060
AN6C44A	Bolt	4 Ea (4 ea)	230-HandFinish	5006337
AN8C35A	Bolt	1 Ea (1 ea)	230-HandFinish	5103997
D2745	Bushing	8 Ea (8 ea)	230-HandFinish	5091819
D3488-042	Blade Fitting RH	1 Ea (1 ea)	230-HandFinish	5093460
D3492-1	Plug	8 Ea (8 ea)	230-HandFinish	5096814
D3492-3	Plug	8 Ea (8 ea)	230-HandFinish	5091848
D3535-25	Wearplate Center	1 Ea (1 ea)	230-HandFinish	5097987
D3536-25	Gasket Center	1 Ea (1 ea)	230-HandFinish	5099641
D3537-1	Wearpad	3 Ea (3 ea)	230-HandFinish	5083401
D3631-1	Washer	8 Ea (8 ea)	230-HandFinish	5058407
D3791-1	Wearpad	1 Ea (1 ea)	230-HandFinish	5081690
D3793-1	Wearplate Fwd	1 Ea (1 ea)	230-HandFinish	5089463
D3793-3	Wearplate Aft	1 Ea (1 ea)	230-HandFinish	5071973
D3794-1	Gasket Fwd	1 Ea (1 ea)	230-HandFinish	5081739
D3794-3	Gasket Aft	1 Ea (1 ea)	230-HandFinish	5099197
MS21043-6	Nut	4 Ea (4 ea)	230-HandFinish	5058146
MS21083C8	Nut	1 Ea (1 ea)	230-HandFinish	5090633
NAS1149C0332R	Washer	38 Ea (38 ea)	230-HandFinish	5071667
NAS1149C0832R	Washer	1 Ea (1 ea)	230-HandFinish	5076017-2
NAS1515H3L	Washer	4 Ea (4 ea)	230-HandFinish	5083559
NAS1611-010	O-Ring	8 Ea (8 ea)	230-HandFinish	5092199
NAS1611-013	O-Ring	8 Ea (8 ea)	230-HandFinish	5057659
AN8C21A	Bolt	2 Ea (2 ea)	250-Packaging	5099514
D2741	Replacement Blade	1 Ea (1 ea)	250-Packaging	5082286
D3493-1	Washer	2 Ea (2 ea)	250-Packaging	5095455
D3532-1	Spacer	2 Ea (2 ea)	250-Packaging	5090421
MS21083C8	Nut	2 Ea (2 ea)	250-Packaging	5083551
NAS1149D0863J	Washer	2 Ea (2 ea)	250-Packaging	5089248

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation	D2600-3-BENT-RH	1	19	0
110-Skidtubes	D2744	1	60	0
160-Skidtubes	D2739	1	37	0
	D2743	8	87	0
	D3490-1	4	203	0
	D3490-3	4	130	0

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐		Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐					
		OTHER : ☐							

230-HandFinish

ALS4-1032-225	38	4,225	0
AN3C5A	34	2,030	0
AN3C6A	4	392	0
AN6C44A	4	283	0
AN8C35A	1	46	0
D2745	8	85	0
D3488-042	1	6	0
D3492-1	8	248	0
D3492-3	8	79	0
D3535-25	1	43	0
D3536-25	1	41	0
D3537-1	3	209	0
D3631-1	8	803	0
D3791-1	1	37	0
D3793-1	1	11	0
D3793-3	1	11	0
D3794-1	1	37	0
D3794-3	1	43	0
MS21043-6	4	240	0
MS21083C8	1	133	0
NAS1149C0332R	38	5,107	0
NAS1149C0832R	1	438	0
NAS1515H3L	4	635	0
NAS1611-010	8	429	0
NAS1611-013	8	1,325	0
AN8C21A	2	106	0
D2741	1	115	0
D3493-1	2	27	0
D3532-1	2	10	0
MS21083C8	2	133	0
NAS1149D0863J	2	77	0

250-Packaging

Part Specifications

Specifications could not be found.

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
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Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____			
Misidentified ☐	Past Due ☐																																																																

QTY -041	QTY -042	QTY -043	QTY -044	PART NUMBER	DESCRIPTION
X				D2750-041	350 SKIDTUBE ASSEMBLY, LH
	X			D2750-042	350 SKIDTUBE ASSEMBLY, RH
		X		D2750-043	350 SKIDTUBE ASSEMBLY, LH
			X	D2750-044	350 SKIDTUBE ASSEMBLY, RH
1	1	1	1	D2739	WEB
8	8	8	8	D2743	SPACER
1	1	1	1	D2744	CAP
8	8	8	8	D2745	BUSHING
1				D2750-1	SKIDTUBE WELDMENT, LH
	1			D2750-2	SKIDTUBE WELDMENT, RH
		1		D2750-3	SKIDTUBE WELDMENT, LH
			1	D2750-4	SKIDTUBE WELDMENT, RH
1		1		D3488-041	BLADE FITTING, LH
	1		1	D3488-042	BLADE FITTING, RH
4	4	4	4	D3490-1	SPACER
4	4			D3490-3	SPACER
		4	4	D3490-5	SPACER
8	8	8	8	D3492-041	PLUG ASSEMBLY
8	8			D3492-043	PLUG ASSEMBLY
		8	8	D3492-045	PLUG ASSEMBLY
1	1	1	1	D3535-25	WEARSHOE
1	1	1	1	D3536-25	GASKET
3	3	3	3	D3537-1	WEARPAD
8	8	8	8	D3631-1	WASHER
1	1	1	1	D3791-1	WEARPLATE
1	1	1	1	D3793-1	WEARSHOE
1	1	1	1	D3793-3	WEARSHOE
1	1	1	1	D3794-1	GASKET
1	1	1	1	D3794-3	GASKET
38	38	38	38	ALS4-1032-225	INSERT (OR ALS7-1032-225, AKS4-1032-225, AELS-1032-225)
34	34	34	34	AN3C5A	BOLT
4	4	4	4	AN3C6A	BOLT
4	4	4	4	AN8C44A	BOLT
1	1	1	1	AN8C35A	BOLT
38	38	38	38	AN960C10L	WASHER
1	1	1	1	AN960C816L	WASHER
4	4	4	4	MS21043-6	NUT
1	1	1	1	MS21083C8	NUT
4	4	4	4	NAS1515H3L	WASHER

GENERAL NOTES:

- MATERIAL: MAKE D2750-1/-2/-3/-4 FROM D2600-3 EXTRUSION (INITIAL LENGTH = 120.0).
- FINISH: ACID ETCH, ALODINE ASSEMBLY PER DART QSI 005 4.1 PRIOR TO INSTALLING D2739 WEB.
STANDARD: PRIME (REF. 4.2.1.3.3) AND PAINT WHITE PER DART QSI 005 4.2
OPTIONAL: POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT AS INDICATED TO 1.0 ABOVE SKIDTUBE CENTER-LINE PER DART 005 4.4 (OPTIONAL).
- TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- UNITS: INCHES UNLESS OTHERWISE NOTED
- BREAK SHARP EDGES: N/A
- IDENTIFICATION: N/A
- WEIGHT: D2750-041/-042/-043/-044 = 26.5 LBS
- WELD PER DART QSI 004
- INSTALL ALS4-1032-225 INSERTS AFTER FINISH AS INDICATED. DRILL 'F' SIZE HOLES ($\phi 0.297$) FOR WEARSHOE INSERTS
- FINAL CONFIGURATION SHOULD HAVE THE FOLLOWING MINIMUM MECHANICAL PROPERTIES:
MINIMUM YIELD TENSILE STRENGTH = 35 KSI
MINIMUM ULTIMATE TENSILE STRENGTH = 38 KSI
- COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF
FINISH WITH MEK DEGREASER.
- SPACER AND PLUG INSTALLED SAME AS SECTION AJ-AJ EXCEPT HORIZONTAL
- SPACER AND PLUG INSTALLED SAME AS SECTION AP-AP EXCEPT HORIZONTAL

SHOP COPY
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UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER

NO. 180133 MJS

18-06-29

RELEASED
2013-08-13
WD

G	CORRECTED TOLERANCE ON $\phi 0.500$ THRU HOLE: IS $+0.010/-0.000$, WAS $+0.100/-0.000$ (ZN B3-4, B2-5); ADD VIEW TO CONTROL FWD BEND ORIENTATION (ZN D-1-4/-5/-6/-7); UPDATED FINISH OPTIONS; INSIDE OF TUBE NO LONGER SPRAYED WITH LPS-3. REASON: PAR13-276 AND NCR13-2757	MB	13.07.11
F	INCORPORATE DSI 9413; QTY (3) D3537-1 WAS QTY (5) (ZN C8-1); D3791-1/-3 REPLACES D3535-13/-35 (ZN C8-1); D3794-1/-3 REPLACES D3536-13/-35 (ZN B8-1); ADD D3791-1 (ZN C8-1); WEARSHOE HOLES UNDER FWD/AFT SADDLE REMOVED (8 PL). WEARSHOE HARDWARE QTY UPDATED (ZN B8-1); D3488-041/-042 HARDWARE UPDATED (ZN C1-8, 9, 10, 11); ADD NOTE 12 AND 13 (ZN A8-1); REASON: REF. NCR 08-043	PH	08.07.16
E	CHANGE TO STAINLESS STEEL WEARPLATES; ADD RUBBER GASKETS; CHANGE INSERTS; ADD D3631-1; REMOVE QTY (38) NAS1515H3L; REMOVE QTY (10) NAS1515H8L; REMOVE D2741; QTY (2) AN960C818; REMOVE QTY (2) MS21083C8	CB	07.05.17
D	ADD HOLES AND SPACERS FOR APICAL FLOATS; INCORPORATE DEO 9133/9157	PH	06.01.05
C	ADD D2750-3/D2750-4; INCORPORATE D2738 AND D2740	CP	98.11.18
B	CHANGE MS24694-S293 TO AN8-16A	CP	98.09.01
A	NEW ISSUE	DS	98.04.16
REV.	DESCRIPTION	BY	DATE
DESIGN	MM		
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	13.07.11		

DART AEROSPACE USA, INC.

KENT, WA

DRAWING NO.

D2750

TITLE

350 SKIDTUBE ASSEMBLY

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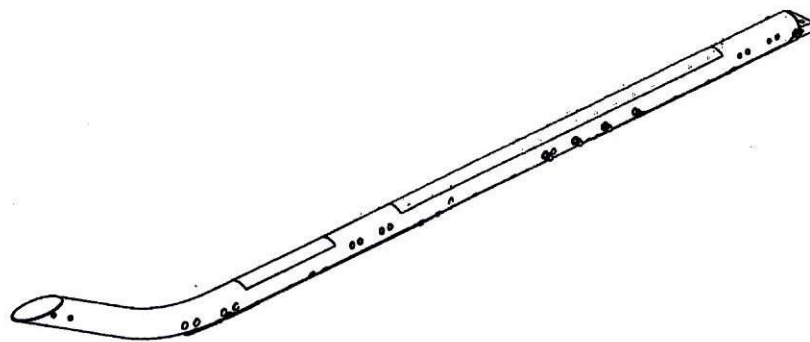
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REV. G

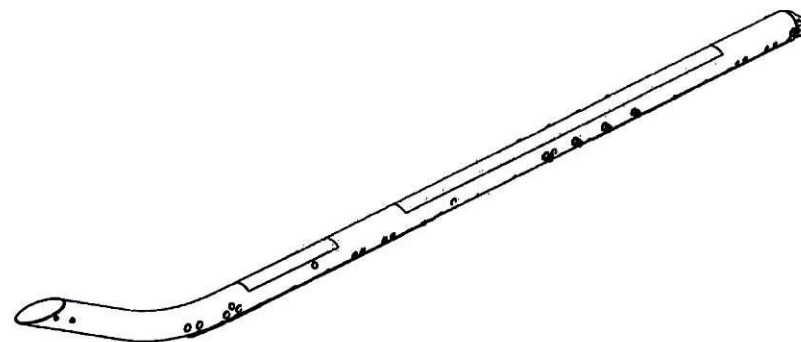
SHEET 1 OF 11

SCALE

NTS



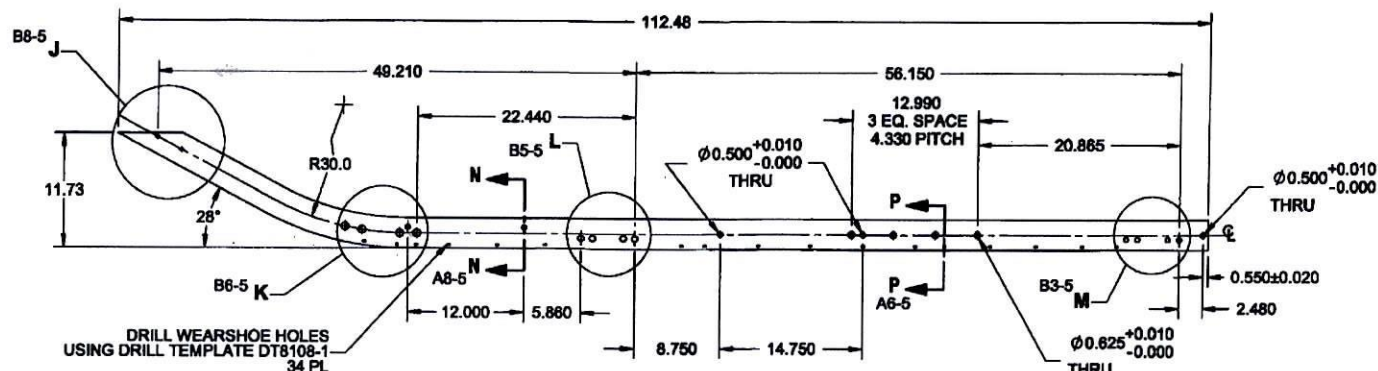
D2750-041 350 SKIDTUBE ASSEMBLY, LH



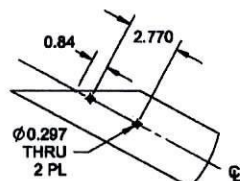
D2750-042 350 SKIDTUBE ASSEMBLY, RH

RELEASED
2013-08-13
JND

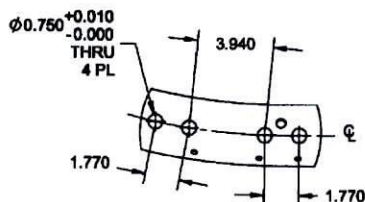
DESIGN	MM	DART AEROSPACE USA, INC.	
DRAWN		KENT, WA	
CHECKED		DRAWING NO.	REV. G
MFG. APPR.		D2750	SHEET 2 OF 11
APPROVED		TITLE	SCALE
DE APPR.		350 SKIDTUBE ASSEMBLY	NTS
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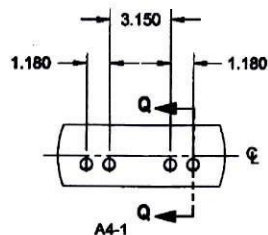
D2750-2 RH SKIDTUBE



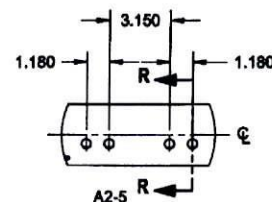
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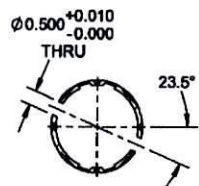
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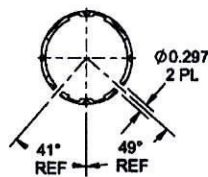
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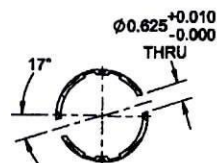
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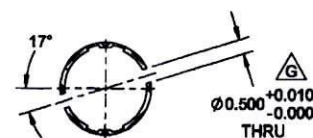
SECTION N-N
SCALE 3X, 2 PL



SECTION P-P
SCALE 3X, 17 PL



SECTION Q-Q
SCALE 3X, 4 PL



SECTION R-R
SCALE 3X, 4 PL

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2013-08-13

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MFG. APPR.	MM	D2750	SHEET 6 OF 11
APPROVED		TITLE	SCALE
DE APPR.		350 SKIDTUBE ASSEMBLY	NTS
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Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER **PO040993**

Supplier: ATE003-VC
Atelier Debosselage
358 Principale
Calumet
QC
J0V 1B0 Canada
Phone: 819 242 5633

PO No: PO040993
PO Date: 9/12/18
Due Date: 9/14/18
Purchase Order Revision:
Revision Date:
Ship-To Contact: Lavoie, Chantal
clavoie@dartaero.com

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

Via: Ground
Pymt Terms: Net 30
Freight Terms:
Special Comments:

Items

Line Item	Job	Part	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	178941	D350-636-011	Skidtube LH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp. : TC STC SH99-7 Issue 2, FAA STC SR00646SE 15/10/28, EASA STC EASA.10033942 11/02/21, BRAZIL 2009S05-01 09/05/08	Firmed	-	9/14/18	1 pcs	0 pcs	1 pcs	\$225.00/pcs	\$225.00
	180084		X SEP 13 2018	Firmed	-	9/14/18	1 pcs	0 pcs	1 pcs	\$225.00/pcs	\$225.00
	181318		X SEP 13 2018	Firmed	-	9/14/18	1 pcs	0 pcs	1 pcs	\$225.00/pcs	\$225.00
	181317		X SEP 13 2018	Firmed	-	9/14/18	1 pcs	0 pcs	1 pcs	\$225.00/pcs	\$225.00
Sub Total:							4	0	4		\$900.00

2	181323	D350-636-012	Skidtube RH, Std Wearplates, DART (Apical) Cylindrical/Aerazur Float Comp. : TC STC SH99-7 Issue 2, FAA STC SR00646SE 15/10/28, EASA STC EASA.10033942 11/02/21, BRAZIL 2009S05-01 09/05/08	Firmed	-	9/14/18	1 pcs	0 pcs	1 pcs	\$250.00/pcs	\$250.00
	181324		X SEP 13 2018	Firmed	-	9/14/18	1 pcs	0 pcs	1 pcs	\$250.00/pcs	\$250.00
	178944		X SEP 13 2018	Firmed	-	9/14/18	1 pcs	0 pcs	1 pcs	\$250.00/pcs	\$250.00
	180133		X SEP 13 2018	Firmed	-	9/14/18	1 pcs	0 pcs	1 pcs	\$250.00/pcs	\$250.00
Sub Total:							4	0	4		\$1,000.00

Grand Total: \$1,900.00



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER PO040993

Order Notes

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

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Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

SUBCONTRACT SHIPPER

SUBCONTRACT SHIP TO

Ship To: Atelier Debosselage
358 Principale
Calumet, QC J0V 1B0 Canada
Phone: 819 242 5633 Fax:

SHIPPER

Shipper No: 612
Shipper Date: 9/12/18
Carrier: *
Ship Via:
Vehicle Reg:
Note:
Freight Terms:

Part Information

Part No: D350-636-011
Cust Part No: D350-636-011
Reference No:
Part Information Note: D2750-041 REV G SHEETS 1,2,4,8 IPP Rev:I
02.09.25 IPP Rev:J 06-03-23 As per Rev D IPP
Rev:K 06-07.13 As per dsi9343 IPP Rev:L 07-07-28
Added SS Wearplates(Rev E) JLM Verf:EC IPP
Rev:M 08-04-22 DD verified:EC IPP Rev:N 08-09-23
revF DD verified:ec IPP Rev:O 09-02-06 per PAR09-
010 DD verf:EC IPP Rev:P 10.06.22 revise seq110
DD verf:EC IPP Rev:Q 10.10.01 as per IIN revH
DDverf:EC IPP REV:R 13.08.27 PER ECN13-594 DD
VERF:JLM
Name: Skidtube LH, Std Wearplates, DART (Apical)
Cylindrical/Aerazur Float Comp.
Product Family: Landing Gear
Piece Weight: 0 lbs
Alloy Type:
Alloy - Temper: -
Description: TC STC SH99-7 Issue 2, FAA STC SR00646SE
15/10/28, EASA STC EASA.10033942 11/02/21,
BRAZIL 2009S05-01 09/05/08
Quantity:
Drawing No:
Program:
Program Customer:
Addl Docs:
Commercial: Product Line: Skidtube - Float w/ Standard
Wearplates
Primary OEM Application: Airbus
Manufacturer: DART
Sales Lead Time: 3.5 weeks
Business Segment: Replacement Parts
Advertised on web?: Yes
Shipping Dims & Weights: Metric: L3m x W0.36m x
H0.18m,Actual Weight of 27.22 kg
Shipping Dims & Weights: Imperial: L119" x W14" x
H7",Actual Weight of 60 lbs
Royalty Paid To: DAS USA Inc

OPERATION

Operation: Outsource - 205
Description:
Note:

DETAIL

Part	Operation	PO	Job	Container	Heat Code	Net Weight (lbs)	Gross Weight (lbs)	Quantity
D350-636-011 09/20/2017 LMC For Float Systems Under FAA STC SR00470La (AS350 Models) And SR00645LA (AS355 Models). Not Currently Compatible With 20331.101/102 Utility Floats. Contact Engineering For Custom Manufactured Undrilled Skid tubes. When Quoting Customers That Require PMA Approval, You	Outsource	PO040993	178941	S091968		0	0	1

9/12/2018

[Dart Hawkesbury] Subcontract Shipper - Lavoie, Chantal

Will Need To Quote The Customer With Lead Time
 Comment: Exworks Eugene, PMA Required. Hawkesbury Provides Lead Time. If Customer Sends Quote Request Or Po With -PMA, You Must Communicate With The Customer To Ask Them To Review The Part Number To D350-636-011. Oversized Item, Please Refer To Shipping Instructions.

D350-636-012

09/20/2017 LMC For Float Systems Under FAA STC SR00470LA (AS350 Models) And SR00645LA (AS355 Models). Not Currently Compatible With 20331.101/.102 Utility Floats. Contact Engineering For Custom Manufactured Undrilled Skidtubes. When Quoting Customers That Require PMA Approval, You Will Need To Quote The Customer With Lead Time
 Comment: Exworks Eugene, PMA Required. Hawkesbury Provides Lead Time. If Customer Sends Quote Request Or Po With -PMA, You Must Communicate With The Customer To Ask Them To Review The Part Number To D350-636-012. Oversized Item, Please Refer To Shipping Instructions.

Outsource**PO040993**

180084 S100693

0

0

1

181318 S100886

0

0

1

181317 S101001

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0

1

180133 S099782

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1

178944 S100104

0

0

1

181324 S100257

0

0

1

181323 S100443

0

0

1

Total**8****0****0****8**

Driver Signature

Customer Copy

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DART

DESIGN <i>PH</i>	DRAWN BY <i>PH</i>	DART AEROSPACE USA, INC. PORT HADLOCK, WA	
CHECKED <i>CP</i>	APPROVED <i>#</i>	DRAWING NO. DSI 9343	REV. A SHEET 1 OF 1
DATE 06.07.12	TITLE D350-636-011/-012 SPACER		SCALE NTS
A	06.07.12	NEW ISSUE	

DART SERVICE INSTRUCTION

TO AMEND DRAWING IIN-D350-636 REV. D

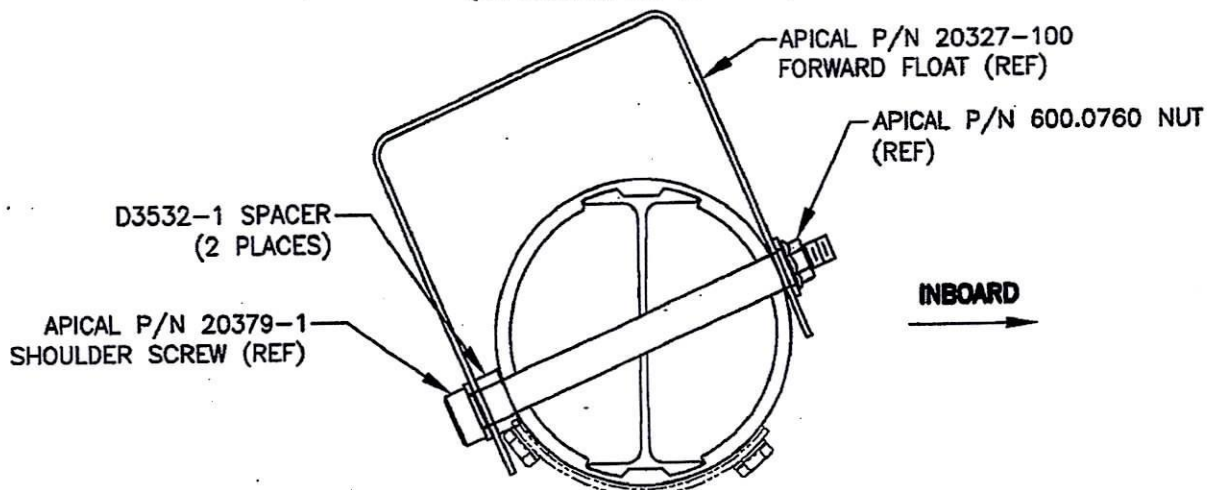
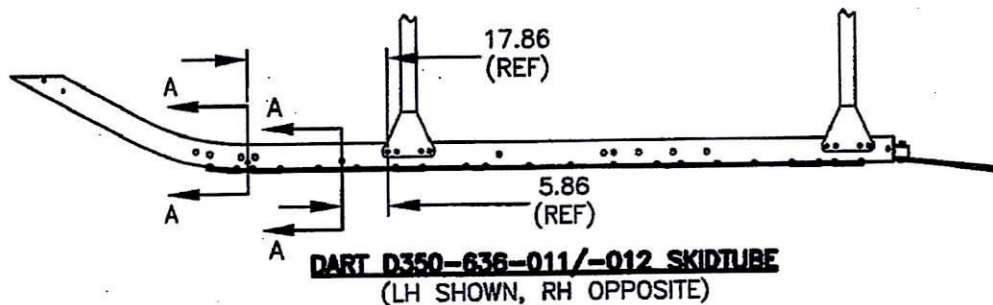
REF. FAA STC: SR00646SE

REF. CANADIAN STC: SH99-7

WHEN INSTALLING THE APICAL P/N 20327-100 FWD FLOATS ONTO THE DART D350-636-011/-012 SKIDTUBES, INSTALL THE DART D3532-1 SPACER AS SHOWN IN SECTION A-A TO ALLOW CLEARANCE FROM THE FWD WEARPLATES.

ADD THE FOLLOWING PARTS TO THE PARTS LIST ON PAGE 10 AND 11 OF IIN-D350-636 REV D:

Item	Qty -011	Qty -012	Qty -103	Qty -104	Part Number	Description
	X				D350-636-011	SKIDTUBE INSTALLATION, LH, STD AERAZUR/APICAL CYLINDRICAL FLOAT COMPATIBLE
		X			D350-636-012	SKIDTUBE INSTALLATION, RH, STD AERAZUR/APICAL CYLINDRICAL FLOAT COMPATIBLE
			X		D350-636-103	APICAL FLOAT CONVERSION KIT, LH
				X	D350-636-104	APICAL FLOAT CONVERSION KIT, RH
50	2	2	2	2	D3532-1	SPACER



SECTION A-A: DART D350-636-011/-012 SKIDTUBE
(LH SHOWN, RH OPPOSITE)

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6.0 PARTS LIST

(D350-636-011/-012/-013/-014 SKIDTUBES AT CHANGE 004 OR LATER)

Item	Qty -011	Qty -012	Qty -013	Qty -014	Qty -045	Part Number	Description
	X					D350-636-011	SKIDTUBE INSTALLATION, LH, STD AERAZUR/APICAL CYLINDRICAL FLOAT COMPATIBLE
		X				D350-636-012	SKIDTUBE INSTALLATION, RH, STD AERAZUR/APICAL CYLINDRICAL FLOAT COMPATIBLE
			X			D350-636-013	SKIDTUBE INSTALLATION, LH AIRCRAUSER/ APICAL TRI-BAG FLOAT COMPATIBLE
				X		D350-636-014	SKIDTUBE INSTALLATION, RH AIRCRAUSER/ APICAL TRI-BAG FLOAT COMPATIBLE
					X	D350-636-045	WEARSHOE KIT
1	1					D2750-041	SKIDTUBE ASSEMBLY, LH
1		1				D2750-042	SKIDTUBE ASSEMBLY, RH
1			1			D2750-043	SKIDTUBE ASSEMBLY, LH
1				1		D2750-044	SKIDTUBE ASSEMBLY, RH
*1	1					D2750-1	SKIDTUBE WELDMENT, LH
*1		1				D2750-2	SKIDTUBE WELDMENT, RH
*1			1			D2750-3	SKIDTUBE WELDMENT, LH
*1				1		D2750-4	SKIDTUBE WELDMENT, RH
**2	8	8	8	8		350A41-1027-20	SCREW
**3	8	8	8	8		23119AG120LE	WASHER
**4	8	8	8	8		22541N120	NUT
*5	1	1	1	1		AN8C35A	BOLT
*6A	1	1	1	1		AN960C816L	WASHER
*7	1	1	1	1		MS21083C8	NUT
*8	1		1			D3488-041	BLADE FITTING, LH
*8		1		1		D3488-042	BLADE FITTING, RH
9	1	1	1	1		D2741	BLADE
10	2	2	2	2		AN8C21A	BOLT
11	2	2	2	2		AN960C816L	WASHER (OR NAS1149D816L)
12	2	2	2	2		MS21083C8	NUT
*14	4	4	4	4		AN6C44A	BOLT
*15	8	8	8	8		D2745	BUSHING
*16	4	4	4	4		MS21043-6	NUT
*17	8	8	8	8		D3631-1	WASHER
*18	4	4	4	4		ALS4-1032-225	INSERT
*19	4	4	4	4		AN3C6A	BOLT
*20A	4	4	4	4		AN960C10L	WASHER
*20B	4	4	4	4		NAS1515H3L	WASHER

(CONTINUED ON NEXT PAGE)

(CONTINUED FROM PREVIOUS PAGE)

Item	Qty -011	Qty -012	Qty -013	Qty -014	Qty -043	Part Number	Description
*20A	4	4	4	4		AN960C10L	WASHER (REPLACES AN960JD10)
*20B	4	4	4	4		NAS1515H3L	WASHER (REPLACES AN960JD10)
*22	5	5	5	5	5	D3537-1	WEARPAD (REPLACES D2648-3)
*23A	1	1	1	1	1	D3535-13	WEARSHOE (REPLACES D2656-13)
*23B	1	1	1	1	1	D3536-13	GASKET
*24A	1	1	1	1	1	D3535-25	WEARSHOE (REPLACES D2746)
*24B	1	1	1	1	1	D3536-25	GASKET
*25A	1	1	1	1	1	D3535-35	WEARSHOE (REPLACES D2656-35)
*25B	1	1	1	1	1	D3536-35	GASKET
*26A	38	38	38	38	38	AN3C5A	BOLT (REPLACES AN3-5A)
*26B	4	4	4	4	4	AN3C7A	BOLT (REPLACES AN3-7A)
*27	42	42	42	42	42	AN960C10L	WASHER (REPLACES AN960JD10)
*28	38	38	38	38		ALS4-1032-225	INSERT (REPLACES NAS1330S3KB166)
*30	8	8	8	8		D3492-041	PLUG ASSEMBLY
*31	8	8				D3492-043	PLUG ASSEMBLY
*32			8	8		D3492-045	PLUG ASSEMBLY
***43	2	2	2	2		AN960C10L	WASHER
50	2	2				D3537-1	SPACER

* PART OF D2750-041/-042 OR D2750-043/-044 ASSEMBLY

** TO BE SUPPLIED BY CUSTOMER

*** ONLY INSTALLED IF INSTALLING AN APICAL FLOAT SYSTEM

5.0 PARTS LIST

(D350-636-011/-012/-013/-014 SKIDTUBES AT CHANGE 003)

Item	Qty -011	Qty -012	Qty -013	Qty -014	Qty -043	Part Number	Description
	X					D350-636-011	SKIDTUBE INSTALLATION, LH, STD AERAZUR/APICAL CYLINDRICAL FLOAT COMPATIBLE
		X				D350-636-012	SKIDTUBE INSTALLATION, RH, STD AERAZUR/APICAL CYLINDRICAL FLOAT COMPATIBLE
			X			D350-636-013	SKIDTUBE INSTALLATION, LH AIRCRAUSER/ APICAL TRI-BAG FLOAT COMPATIBLE
				X		D350-636-014	SKIDTUBE INSTALLATION, RH AIRCRAUSER/ APICAL TRI-BAG FLOAT COMPATIBLE
					X	D350-636-043	WEARSHOE KIT (REPLACES -041 KIT)
1	1					D2750-041	SKIDTUBE ASSEMBLY, LH
1		1				D2750-042	SKIDTUBE ASSEMBLY, RH
1			1			D2750-043	SKIDTUBE ASSEMBLY, LH
1				1		D2750-044	SKIDTUBE ASSEMBLY, RH
*1	1					D2750-1	SKIDTUBE WELDMENT, LH
*1		1				D2750-2	SKIDTUBE WELDMENT, RH
*1			1			D2750-3	SKIDTUBE WELDMENT, LH
*1				1		D2750-4	SKIDTUBE WELDMENT, RH
**2	8	8	8	8		350A41-1027-20	SCREW
**3	8	8	8	8		23118AG120LE	WASHER
**4	8	8	8	8		22541N120	NUT
*5	1	1	1	1		AN8C35A	BOLT (REPLACES AN8-35A)
*6A	2	2	2	2		AN960C816L	WASHER (REPLACES AN960JD816)
*6B	2	2	2	2		NAS1515H8L	WASHER
*7	1	1	1	1		MS21083C8	NUT (REPLACES MS21083N8)
*8	1		1			D3488-041	BLADE FITTING, LH (REPLACES D2742-1)
*8		1		1		D3488-042	BLADE FITTING, RH (REPLACES D2742-2)
9	1	1	1	1		D2742-1	BLADE
10	2	2	2	2		AN8C21A	BOLT (REPLACES AN8-16A)
11A	2	2	2	2		AN960C816L	WASHER (REPLACES AN960JD816)
11B	2	2	2	2		D3672-13	WASHER
12	2	2	2	2		MS21083C8	NUT (REPLACES MS21083N8)
*13	4	4	4	4		ALS4-1032-225	INSERT
*14	4	4	4	4		AN6C44A	BOLT (REPLACES AN6-44A)
*15	8	8	8	8		D2745	BUSHING
*16	4	4	4	4		MS21043-6	NUT (REPLACES MS21042L6)
*17	8	8	8	8		D3631-1	WASHER (REPLACES NAS1515H8L)
*18	4	4	4	4		ALS4-1032-225	INSERT (REPLACES NAS1330S3KB166)
*19	4	4	4	4		AN3C6A	BOLT (REPLACES AN3-6A)

(CONTINUED ON NEXT PAGE)